

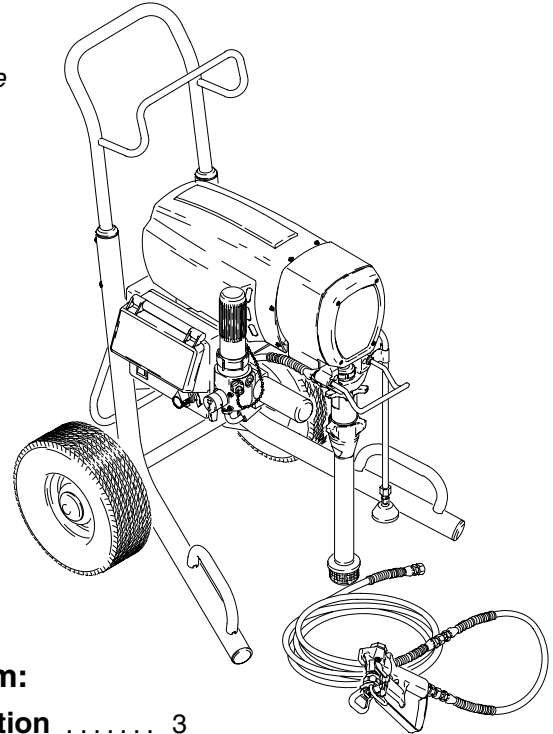
# Ultra Max™ Electric Airless Sprayers Operating Instructions



309273

Rev. D

3300 psi (227 bar 22.7 MPa) Maximum Working Pressure



## How To Perform:

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The intent of these instructions is to provide the new painter with a quick and easy reference to become familiar with airless sprayers. This does not replace the Instruction Manual supplied with this sprayer. Read and understand the instructions and warnings in that manual.

**Important Note:** *The Graco Standard product line has a wide range of sprayer units that vary slightly. The basic operations procedures are the same for all sprayers. Some illustrations may not be applicable to the particular sprayer purchased.*

### Tools Required:

- Two adjustable wrenches
- Two 5 gallon metal pails
- Grounding wires and clamps for pails
- Pencil

### Suggested proper clothing:

- Respirator
- Safety glasses

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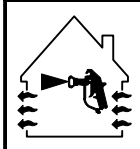
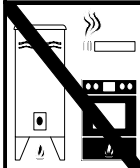
## ! WARNING



**Fire and explosion hazard:** Solvent and paint fumes can ignite or explode.

**To help prevent a fire and explosion:**

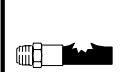
- Use only in an extremely well ventilated area.
- Eliminate all ignition sources; such as pilot lights, cigarettes and static arcs from plastic drop cloths. Do not plug or unplug power cords or turn lights on or off in spray area.
- Ground Sprayer, object being sprayed, paint and solvent pails.
- Hold gun firmly to side of grounded pail when triggering into pail.
- Use only conductive airless paint hose.
- Do not use 1,1,1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents in pressurized aluminum equipment. Such use could result in a chemical reaction, with the possibility of explosion.
- To reduce risk of electric shock, use grounded outlet only. Shut OFF and unplug when repairing.



**Fluid injection and high pressure hazard:** High pressure spray or leaks can inject fluid into the body.

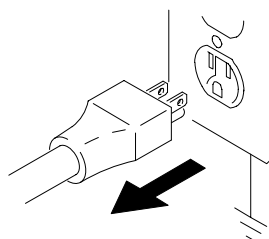
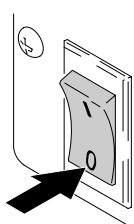
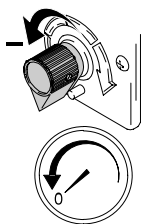
**To help prevent injection, always:**

- Engage trigger safety latch when not spraying.
- Keep clear of nozzle and leaks.
- Never spray without a tip guard.
- Do **PRESSURE RELIEF** if you stop spraying or begin servicing sprayer.
- Do not use components rated less than sprayer *Maximum Working Pressure*.
- Never allow children to use this unit.

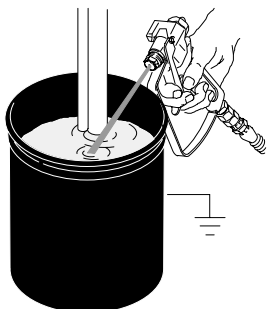


**If high pressure fluid pierces your skin,** the injury might look like "just a cut". But it is a serious wound! Get immediate medical attention.

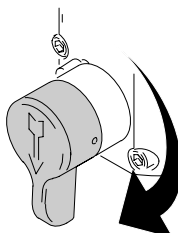
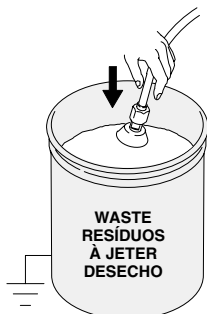
### PRESSURE RELIEF – Do this when cleaning, repairing or shutting down sprayer



1. Turn pressure to lowest setting.  
Turn power **OFF**.  
Unplug sprayer.



2. Trigger gun to relieve pressure.



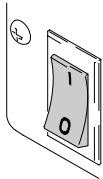
3. Put drain tube in pail.  
Turn prime valve down.

# Component Identification

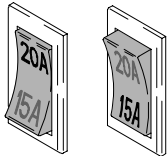
## Digital Display

(Not available on all models)

## Power Switch

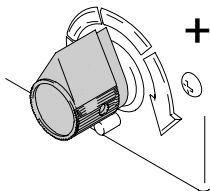


## 15/20A Switch

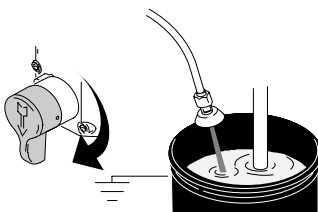


Use 15A if sprayer causes circuit breakers to trip (1095/1595 only)

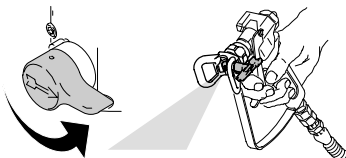
## Pressure Control



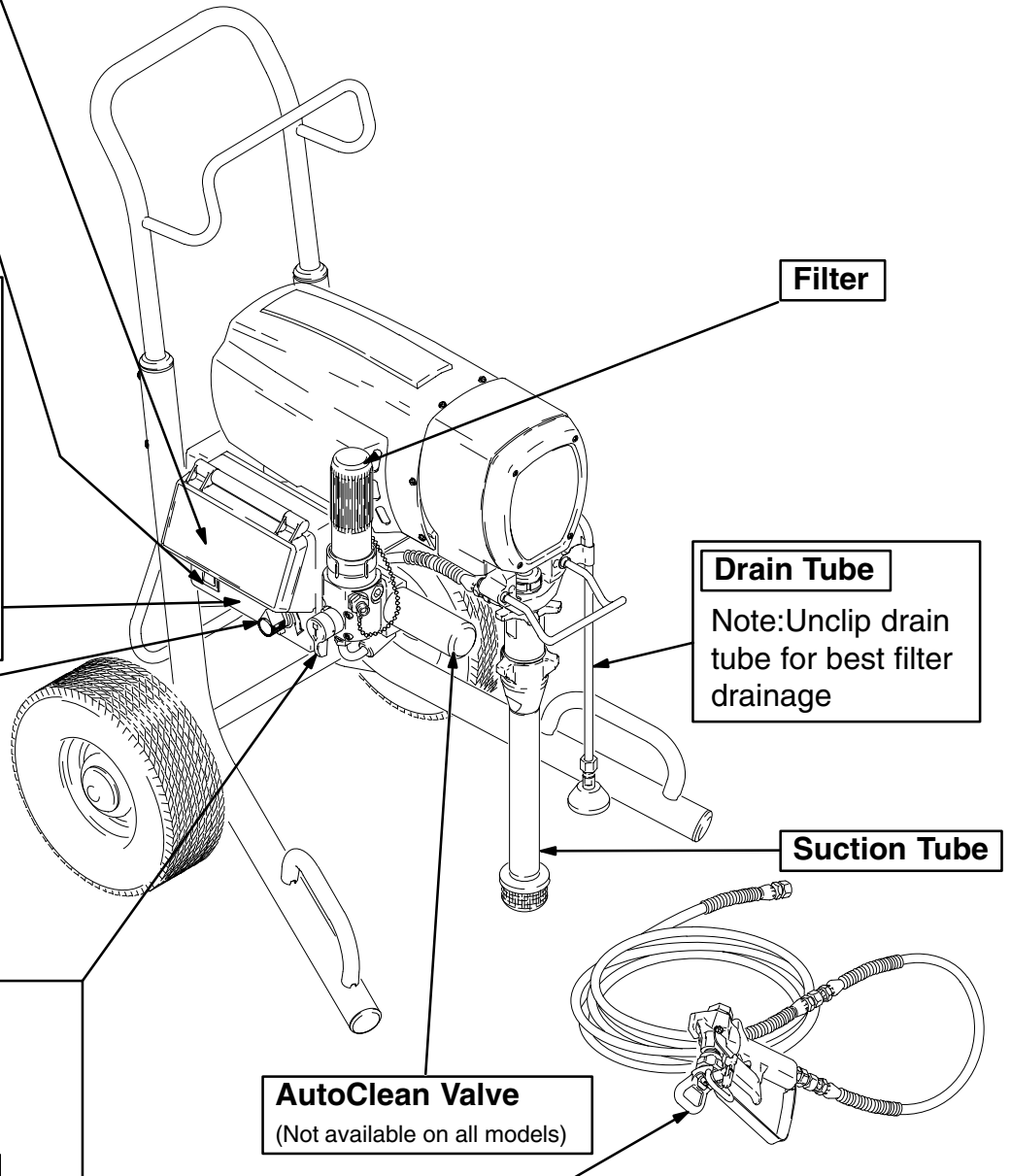
## Prime Valve



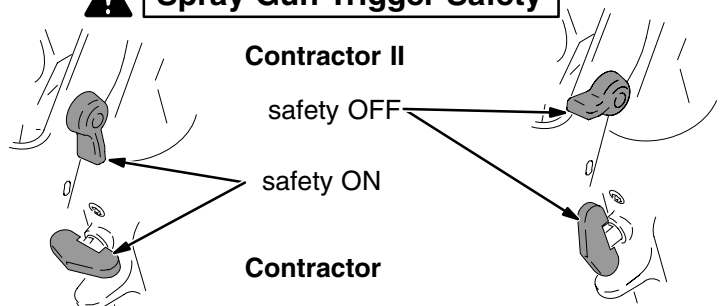
Prime/drain position



Paint position



## Spray Gun Trigger Safety



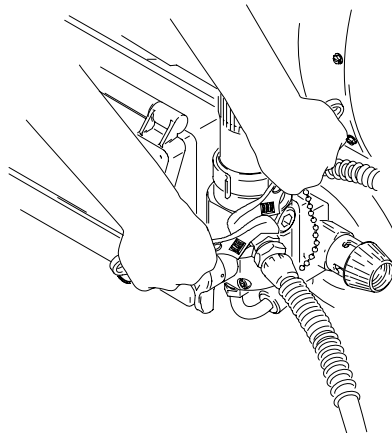
Put trigger safety ON when not spraying.

Take trigger safety OFF before triggering gun.

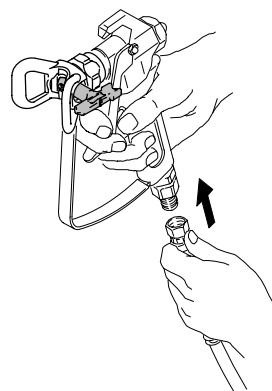
# Setup

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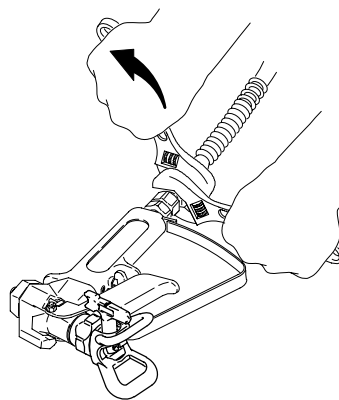
1. Connect Graco airless hose to sprayer.  
Tighten securely.



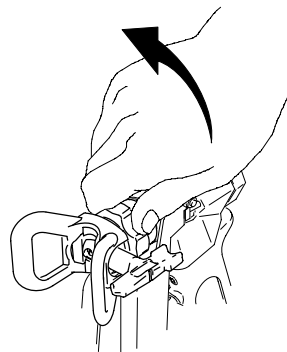
- 
2. Connect other end of hose to gun.



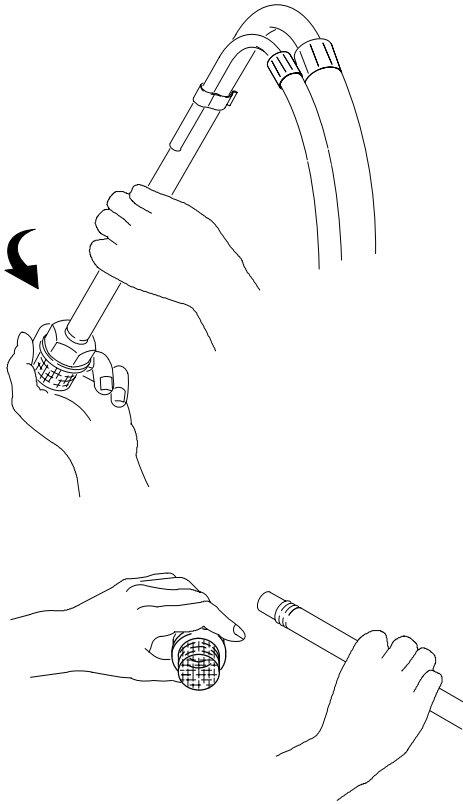
- 
3. Tighten securely.



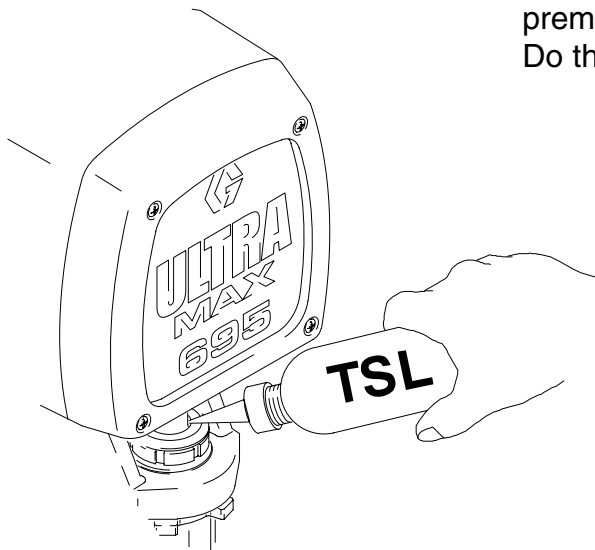
- 
4. Remove tip guard.



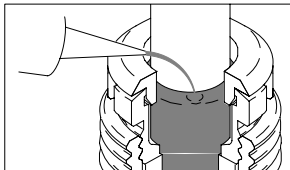
- 
5. Check inlet strainer for clogs and debris.



- 
6. Fill throat packing nut with TSL to prevent premature packing wear.  
Do this each time you spray.

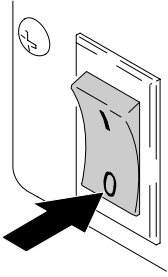


Approximate Fill Level



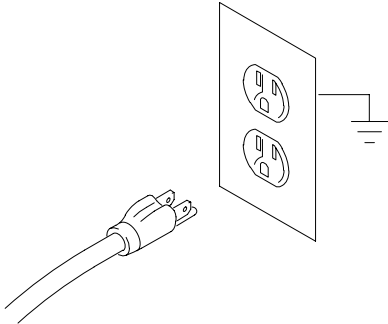
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7. Turn power **OFF**.



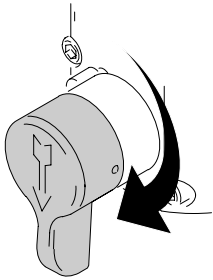
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8. Plug power supply cord into a properly grounded electrical outlet.



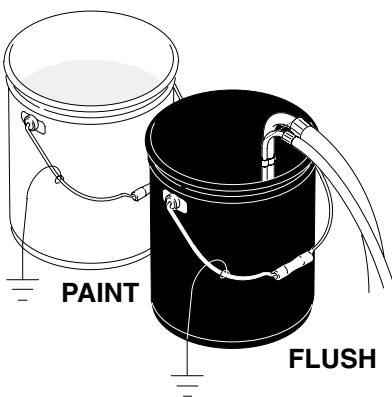
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9. Turn prime valve down.



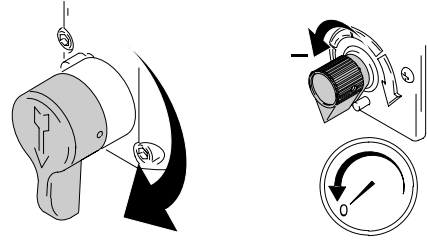
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10. Place suction tube and drain tube in grounded metal pail partially filled with flushing fluid. Attach ground wire to pail and to true earth ground. Do 1. – 5. of **Startup** to flush out storage oil shipped in sprayer. Use water to flush water base paint and mineral spirits to flush oil base paint and storage oil.

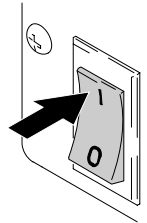


# Startup

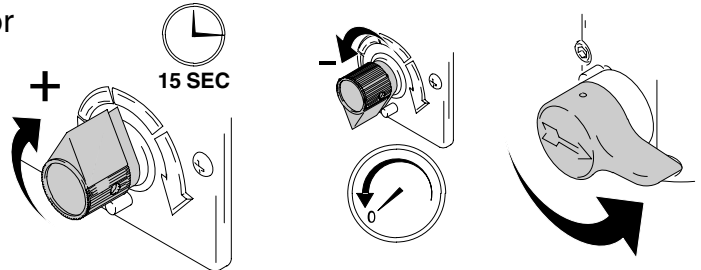
1. Turn prime valve down.  
Turn pressure control to lowest pressure.



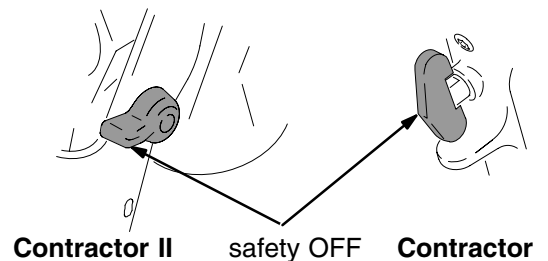
2. Turn power **ON**.



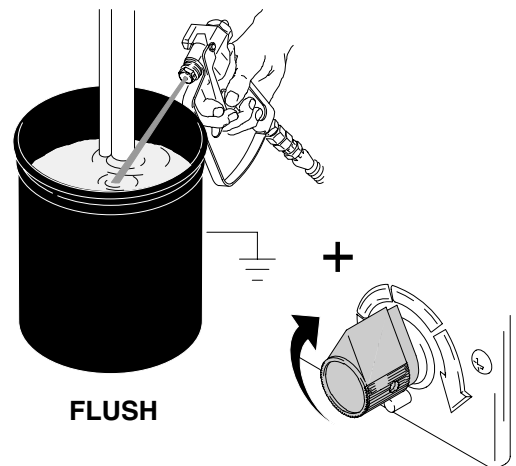
3. Increase pressure enough to start motor and allow fluid to circulate for 15 seconds; turn pressure down, turn prime valve horizontal.



4. Take spray gun trigger safety OFF.

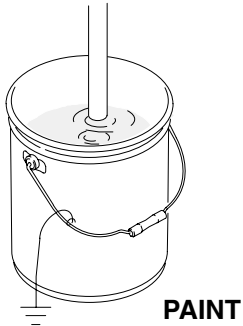


5. Hold gun against grounded metal flushing pail. Trigger gun and increase fluid pressure slowly until pump runs smoothly.

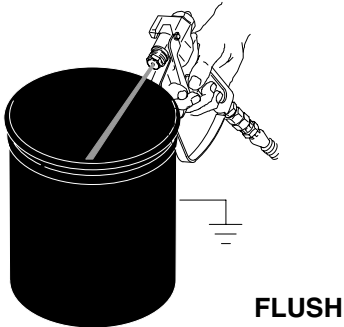


**Note:** Inspect fittings for leaks. **⚠ Do not stop leaks with your hand or a rag!** If leaks occur, do **Pressure Relief**. Tighten leaky fittings. Repeat **Startup, 1. – 5.** If no leaks, continue to trigger gun until system is thoroughly flushed. Proceed to **6.**

6. Place siphon tube in paint pail.



7. Trigger gun again into flushing fluid pail until paint appears. Assemble tip and guard, page 8.

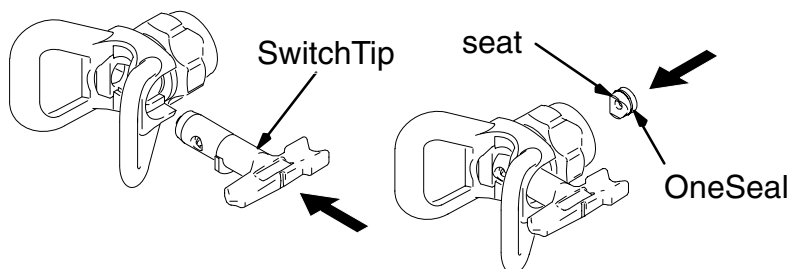


## General Surfaces Tip Recommendations Chart

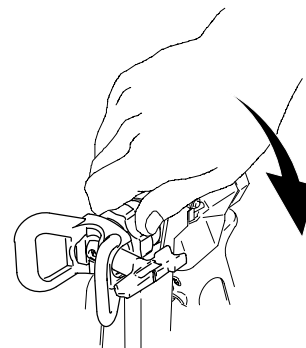
Surfaces	Materials	Filter Mesh	Fan Width (in.) at 12 in.				Orifice Size (in.)
			6-8	8-10	10-12	12-14	
Wood Interior Cabinets, Paneling	Stain, Sanding Sealer, Lacquer, Varnish, Shellac	100	•	•			.011
			•	•			.013
Interior Walls or Ceilings Drywall, Plaster	Latex, Vinyl, Acrylic	60		•	•	•	.015
				•	•	•	.017
				•	•	•	.019
Over Hang	Primers, Enamels	60	•	•	•		.015
				•	•		.017
						•	.019
Masonry Block, Stucco, Concrete	Latex, Vinyl, Acrylic, Oil Base Alkyds	60		•	•		.017
					•		.019
					•	•	.021
Wood Exterior Shingle, Siding, Shiplap	Exterior Stains, Latex, Vinyl, Acrylic	60			•		.017
					•		.019
					•	•	.021
Open Joist and Ceiling Areas	Mil White, Hi Builds	60			•		.019
							.021
					•	•	.023



1. Insert SwitchTip.  
Insert seat and OneSeal.



2. Screw assembly onto gun. Hand tighten.



**SMARTCONTROL™**  
(Not available on all models\*)

### Operation

Press **SMARTCONTROL** button to cycle through  
**PRESSURE – GAL/LTR – TIMER** displays

- **PRESSURE:** Fluid pressure at the sprayer
- **GAL/LTR:** Accumulated total of gallons/liters sprayed
- **TIMER:** Duration of AutoClean flush cycle

**NOTE:** The **SMARTCONTROL** button is not active if pressure is above 200 psi



### Error Codes

Sprayer stops and displays error code if fault occurs

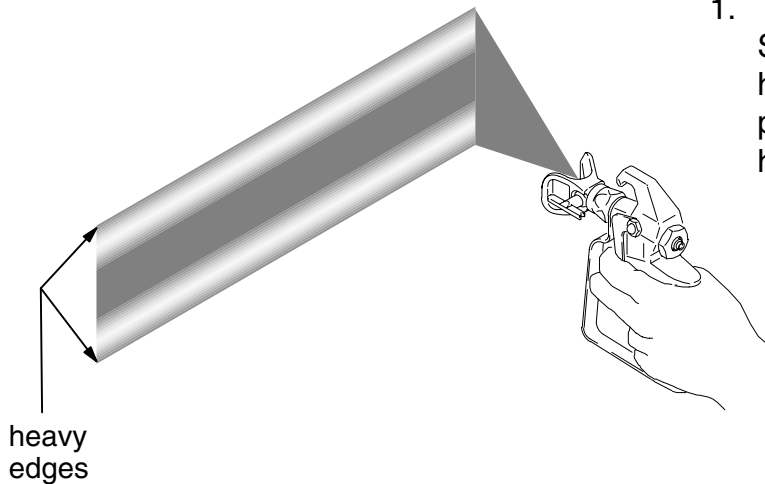
After fault has been corrected or Timer reaches zero, turn sprayer OFF and then ON to reset **SMARTCONTROL**

\* Models not equipped with digital displays:  
Error codes are displayed inside **SMART-CONTROL**. Refer to Manual 309255 for instructions.

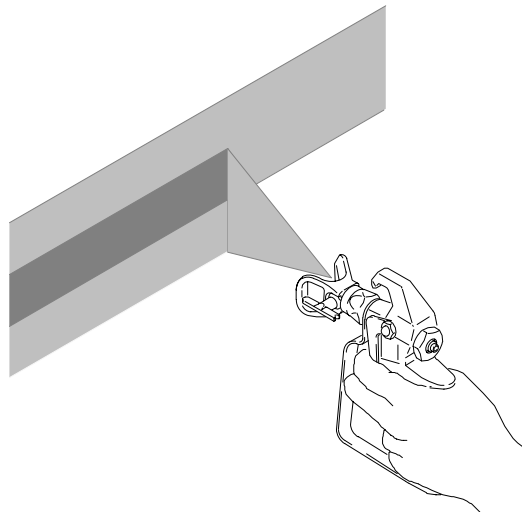
E = 02	High pressure limit
E = 03	Pressure transducer fault
E = 04	Line voltage too high
E = 05	Too much current
E = 06	Motor overheated
E = 07	Pressure > 2000 psi while in Flush Timer Mode
E = 08	Line voltage too low
- - - -	Pressure is below 200 psi
8888	Digital display switches are not set

## Spray Test Pattern

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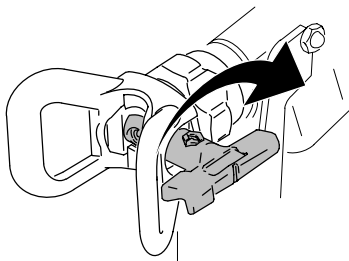
1. Trigger gun and spray test pattern. Slowly adjust pressure to eliminate heavy edges. Use smaller tip size if pressure adjustment can not eliminate heavy edges.



2. Hold gun perpendicular, 10–12 in. (25–30 cm) from surface. Spray back and forth. Use strokes overlapped by 50%. Start gun movement before triggering gun and release trigger before stopping gun movement.

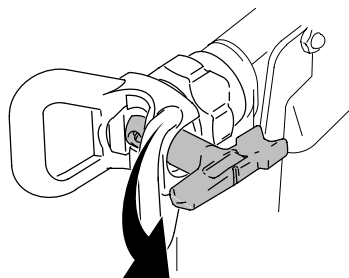
## Clearing Tip Clogs

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1. Release trigger, put trigger safety ON. Rotate SwitchTip. Take trigger safety OFF and trigger gun to clear the clog.

**⚠** Never point gun towards your hand or into a rag!

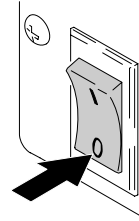


2. Put trigger safety ON, return SwitchTip to original position, take trigger safety OFF and continue spraying.

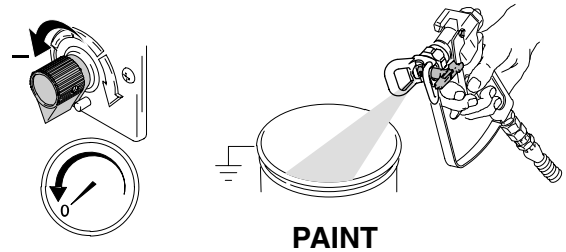
# Cleanup

Perform **AutoClean procedure (Manual 309278)** or follow conventional flushing/cleaning procedure that follows:

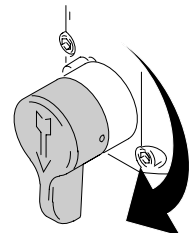
1. Turn power **OFF**.



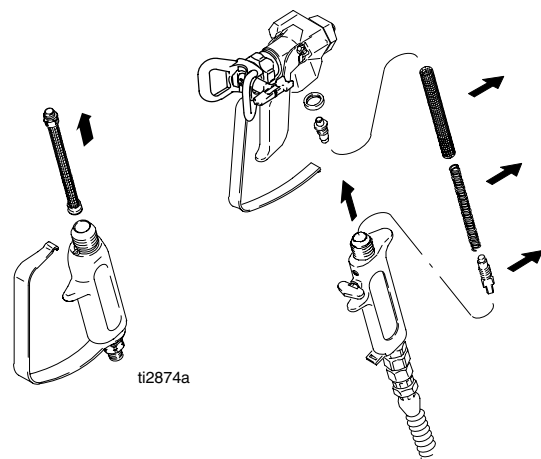
2. Turn pressure to lowest setting.  
Trigger gun to relieve pressure.



3. Turn prime valve down.



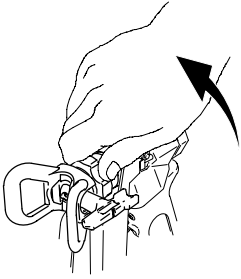
4. Remove filter assembly and  
assemble gun without filter.



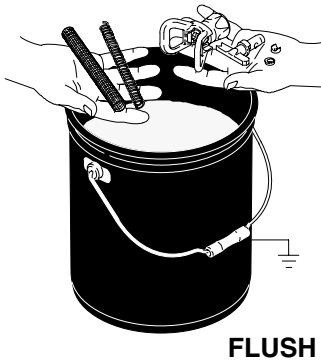
Contractor II

Contractor

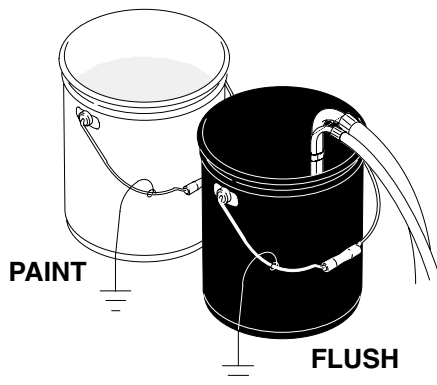
- 
5. Remove guard and SwitchTip.



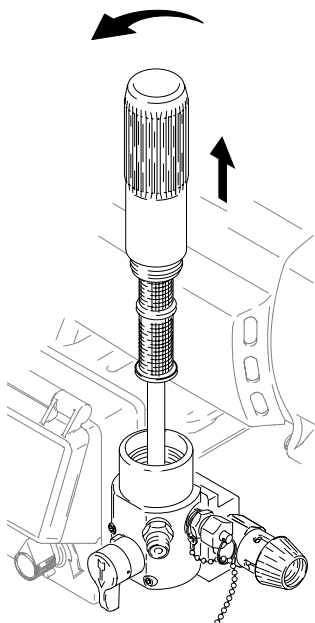
- 
6. Clean filter, guard and SwitchTip in flushing fluid.



- 
7. Remove siphon tube set from paint and place in flushing fluid. Use water for water base paint and mineral spirits for oil base paint.

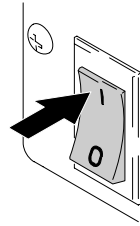


- 
8. If sprayer has a filter, unscrew bowl, remove filter. Assemble without filter. Clean filter.



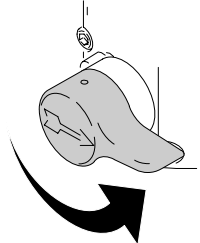
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9. Turn power **ON**.



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10. Turn prime valve horizontal.



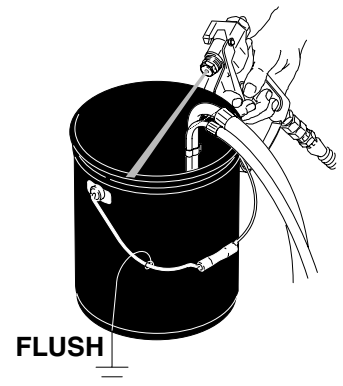
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11. Hold gun against paint pail.  
Take trigger safety **OFF**.  
Trigger gun until flushing  
fluid appears.



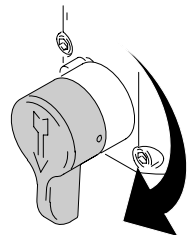
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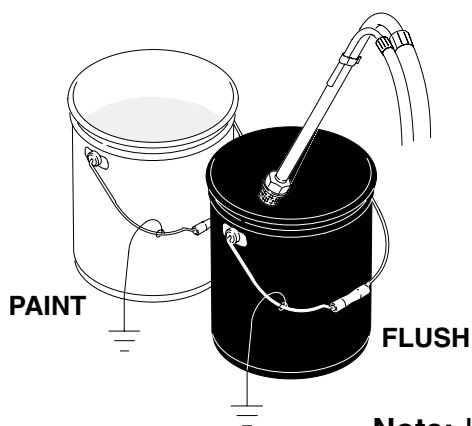
12. Move gun to flushing pail, hold  
gun against pail, trigger gun to  
thoroughly flush system.  
Release trigger and put trigger  
safety ON.



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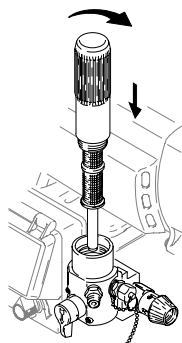
13. Turn prime valve down and allow  
flushing fluid to circulate for 20  
seconds to clean drain tube.



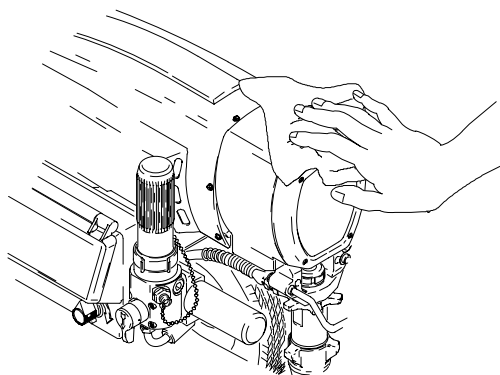


14. Raise siphon tube above flushing fluid and run sprayer for 15 to 30 seconds to drain fluid. Turn power **OFF**.

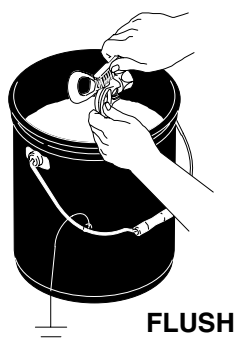
**Note:** If flushing with water, flush again with mineral spirits or Pump Armor, but do not repeat **8.** or **14.** This leaves a protective coating in the system to help prevent freezing or corrosion.



15. Make sure plastic center tube is tightened securely. Install filter bowl and filter. Hand tighten filter bowl. Install filter assembly into gun. Hand tighten gun handle.



16. Wipe sprayer, hose and gun with a rag soaked in water or mineral spirits.



17. Clean tip, guard and gasket with a soft bristle brush to prevent part failure due to dried materials. Assemble parts and attach loosely onto gun.

# Trouble Shooting

TYPE OF PROBLEM	WHAT TO CHECK <i>If check is OK, go to next check</i>	WHAT TO DO <i>When check is not OK refer to this column</i>
● <b>Sprayer does not respond</b>	1. Check if error code is displayed, page 9.	1. Refer to your repair manual.
● <b>Sprayer will not prime or takes too long to prime</b>	1. Air in paint pump	1. Open prime valve to purge air from paint pump
	2. Inlet strainer clogged	2. Clean strainer
	3. Suction tube is loose	3. Tighten fittings
	4. Lower ball is stuck	4. Clean lower ball
	NOTE: Caused by insufficient cleaning and/or not leaving paint thinner in sprayer.	
● <b>Sprayer loses prime while spraying</b>	1. Suction tube is loose	1. Tighten fittings
	2. Lower ball not sealing on down stroke	2. Check for: <ul style="list-style-type: none"> <li>• Large debris holding ball open</li> <li>• Worn or scarred lower ball</li> <li>• Inlet strainer not being used</li> </ul>
● <b>Sprayer does not have enough pressure at gun or pressure drops off</b>	1. Spray tip worn out	1. Replace spray tip
	2. Filters clogged	2. Clean filters
	3. Filtration being used for wrong coatings (i.e. block fillers, elastomerics)	3. Operate with no filter or change coating
	4. Wrong size filter mesh	4. Select coarser filter mesh. 30 instead of 60, 60 instead of 100
	5. Hose too long and/or wrong size diameter.	5. Check sprayer instruction manual for correct size hose
● <b>Sprayer packings wear out too quickly</b>	1. Operating sprayer with clogged or no inlet strainer	1. Clean/install inlet strainer
	2. Priming sprayer without using prime valve	2. Prime sprayer with prime valve
	3. Upper packings have not been inspected/adjusted on regular basis	3. Adjust upper packings after spraying 2 – 5 gallons of paint and then weekly
	4. Throat seal liquid not being used	4. Keep packing nut/wet cup 1/3 full with throat seal liquid
	5. Water or paint being left in sprayer	5. Always leave paint thinner in sprayer
	6. Worn pump cylinder	6. Replace pump cylinder
	7. Kinked or clogged suction tube	7. Replace suction tube
	8. Spraying aggressive coatings (i.e. low and latex, zinc coatings)	8. Use alternate packing materials. Consult your sprayer instruction manual
	9. Unrealistic expectations of packing life	9. Packing life varies with fluids sprayed and pressures used
● <b>Premature wear on prime valve</b>	1. Pressure being relieved at prime valve and not at gun	1. Relieve pressure at gun
	2. Water or paint being left in sprayer	2. Always leave mineral spirits or Pump Armor in sprayer

# Maintenance

# Storage

## Daily:

### Inspect, clean and replace as needed

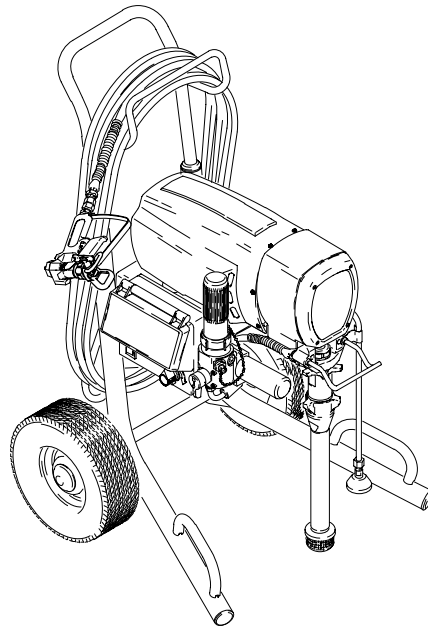
- Manifold filter, gun filter and inlet strainer
- Wet cup for leakage, tighten if needed
- TSL level
- Gun trigger safety
- Tip wear, replace if necessary
- Electric cord and plug

## Weekly:

- Check tightness of wet cup.
- Inspect all high pressure paint hoses.

## Annually:

- Schedule maintenance check at an authorized Graco repair center



1. Perform Cleanup, page 11
2. Wrap power cord and spray hose around sprayer

## Tip Wear

**Worn Tips Waste Paint  
Cost Money!**

NEW



WORN  
OUT



**SPRAY PATTERN WIDTH  
in inches (millimeters)**

12  
(305)

11  
(280)

9  
(229)

5.5  
(140)

**TIP OPENING ENLARGEMENT**

New Tip  
.015

Worn to  
.017

Worn to  
.019

Worn to  
.021

**FLOW RATE  
in gpm (lpm)**

1/4  
(.87)

1/3  
(1.14)

3/8  
(1.4)

1/2  
(1.74)

**Note:** A 515 tip produces a 10 in. pattern width when measured 12 in. from tip to work surface; spraying paint with viscosity of 20 sec #4 Zahn cup and at 1600 psi (110 bar, 11 MPa)

## Graco Phone Number

**TO PLACE AN ORDER,** contact your Graco distributor, or call **1-800-690-2894 Toll Free** to identify a distributor near you.

**Sales Offices:** Minneapolis, Detroit

**International Offices:** Belgium, Korea, Hong Kong, Japan

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